

**TRUCK, LIGHT, INFANTRY & MORTAR CARRIERS, FFR, WINCH, MC2 & TRUCK,
LIGHT, ASSAULT PIONEER, WINCH, MC2 & TRUCK, LIGHT, DIRECT FIRE
WEAPONS, FFR, WINCH, MC2 – LAND ROVER 110 6X6**

TRUCK, LIGHT, ASSAULT PIONEER, WINCH, MC2 – LAND ROVER 6X6

DATA SUMMARY

This instruction is authorised for use by command of the Chief of Army. It provides direction, mandatory controls and procedures for the operation, maintenance and support of equipment. Personnel are to carry out any action required by this instruction in accordance with EMEI General A 001.

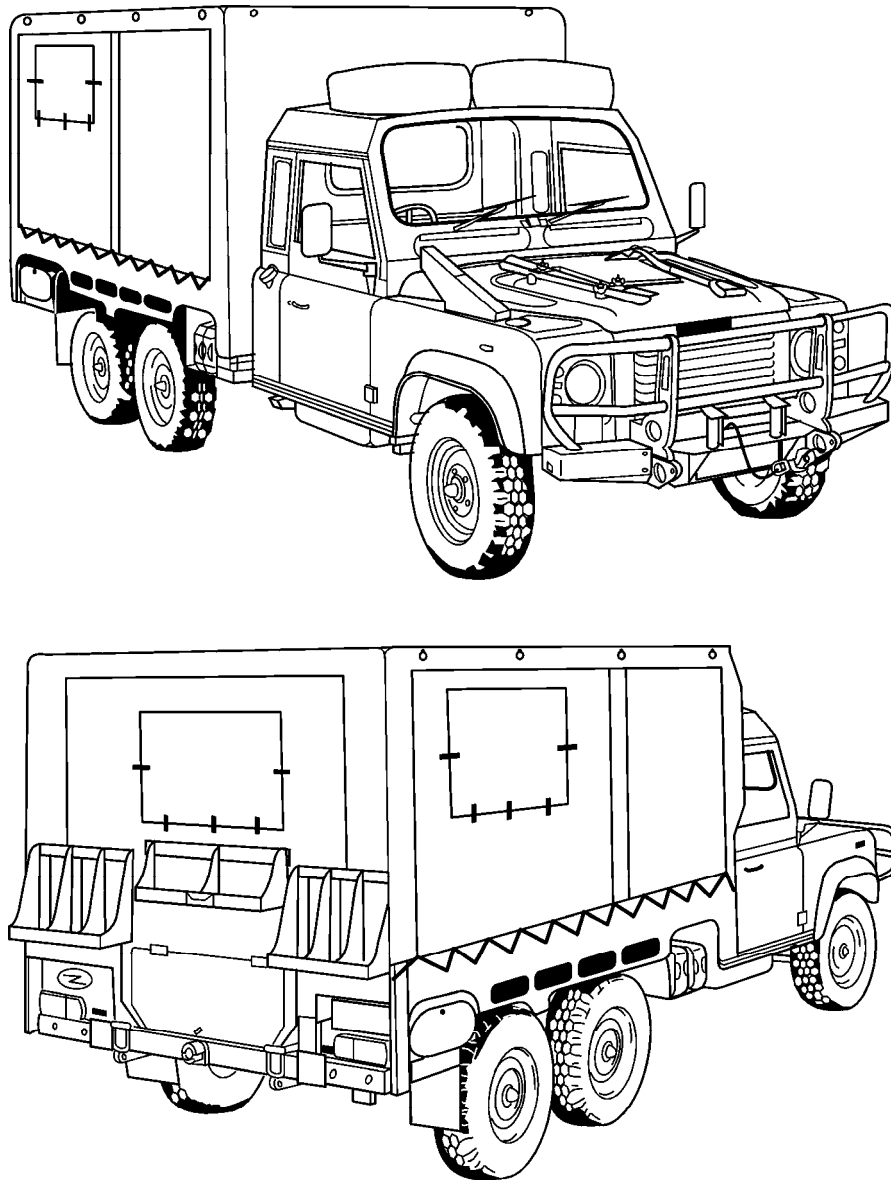


Figure 1 Truck, Light, Assault Pioneer, Winch, MC2 – Land Rover 6X6

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Role

1. The role of the Truck, Light, Assault Pioneer, Winch, MC2 – Land Rover 6x6 (as shown in Figure 1) is to transport an assault pioneer section of six personnel (including the driver), its equipment and supplies for three days in an operational environment.

Physical Data

2. Mass



The vehicle when loaded is not to exceed the Gross Vehicle Mass (GVM) figure of 5 600 kg. The GVM figure takes into account other aspects of the vehicle design apart from the axle loading limits.

- a. Normal
 - (1) Front Axle 1 720 kg
 - (2) Intermediate Axle..... 1 150 kg
 - (3) Rear Axle 1 060 kg
 - (4) Total 3 930 kg
- b. Maximum Loading
 - (1) Front Axle 1 900 kg
 - (2) Intermediate Axle..... 2 050 kg
 - (3) Rear Axle 2 050 kg
 - (4) Total 5 600 kg
- c. Gross Vehicle Mass (GVM)
 - (1) Total (not to exceed) 5 600 kg

3. **Wheels and Tyres**

- a. Wheels..... 6F by 16, 1 piece 5-stud ventilated disc
- b. Tyres and Tyre Pressuresin accordance with EMEI Vehicle A 291-5

4. **Dimensions**

- a. Length6 300 mm
- b. Overall Width
 - (1) Over Mirrors2 500 mm
 - (2) Reduced.....2 165 mm
- c. Overall Height
 - (1) Laden.....2 520 mm
 - (2) Unladen2 550 mm
- d. Reducible Height (normal weight)
 - (1) Laden.....2 050 mm
 - (2) Unladen2 080 mm
- e. Shipping Cubage 37 m3

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f.	Body	
(1)	Length – Internal.....	3 100 mm
(2)	Width – Internal.....	2 085 mm
(3)	Height – Internal.....	1 800 mm
(4)	Belly Height from Ground.....	770 mm
(5)	Body Height from Belly.....	300 mm
g.	Wheelbase	
(1)	Front Axle to Intermediate Axle.....	3 040 mm
(2)	Front Axle to Rear Axle.....	3 940 mm
h.	Track	
(1)	Front.....	1 698 mm
(2)	Rear.....	1 698 mm
i.	Ground Clearance	
(1)	Unladen.....	215 mm
(2)	Limiting Feature	rear differential housings
j.	Pintle Hook Height	
(1)	Unladen.....	680 mm
(2)	Laden	650 mm
5.	Bridge Classification	6
6.	Engine	
a.	Manufacturer/Type.....	Isuzu 4 BD 1 TRB-G series
b.	No. of Cylinders.....	4 (in-line)
c.	Power (Nett).....	90 kW at 3 000 rpm
d.	Torque (Nett).....	314 N.m at 2 200 rpm
e.	Maximum No Load	3 600 ± 100 rpm
f.	Firing Order	1-3-4-2
g.	Capacity	3.856 L
h.	Compression Ratio.....	17:1
i.	Turbocharger.....	water-cooled, Garret model ATD –T25
7.	Transmission	
a.	Manufacturer.....	Land Rover
b.	Type	Model LT95A
c.	Ratios	
(1)	First Gear	4.069:1
(2)	Second Gear.....	2.448:1
(3)	Third Gear.....	1.505:1
(4)	Fourth Gear.....	1.000:1
(5)	Reverse Gear.....	3.664:1

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8. Transfer Case

- a. Manufacturer Land Rover
- b. Type.....two-speed
- c. Ratios
 - (1) High Range 0.966:1
 - (2) Low Range 3.321:1

9. Front Axle

- a. ManufacturerRover Australia
- b. Type.....heavy-duty, spiral bevel
- c. Ratio 4.70:1
- d. Track 1 698 mm

10. Intermediate Axle

- a. Manufacturer GKN/Salisbury
- b. Type heavy-duty, Salisbury 8 HA
- c. Ratio 4.70:1
- d. Track 1 698 mm

11. Rear Axle

- a. Manufacturer GKN/Salisbury
- b. Type..... heavy-duty, Salisbury 8 HA
- c. Ratio 4.70:1
- d. Track 1 698 mm

12. Steering

- a. ManufacturerAdwest
- b. Type..... integral power-assisted worm and roller
- c. Ratio 17.50:1
- d. Lock to Lock 3.5
- e. Power Steering Pump Isuzu gear-driven

13. Winch

- a. ManufacturerWinch Industries
- b. Type..... Thomas T9000M
- c. Reduction Ratio 45:1
- d. Winch Rope
 - (1) Length 45 m
 - (2) Diameter..... 11 mm
- e. Maximum Cable Pull
 - (1) First Drum Layer..... 4 077 kg
 - (2) Second Layer..... 3 488 kg
 - (3) Third Layer 3 048 kg
 - (4) Fourth Layer..... 2 707 kg

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- (5) Fifth Layer (Partial) 2 434 kg
- f. Torque Limiter Setting 155 N.m
- 14. Electrical System (Vehicle) 12 V**
 - a. No. of Batteriesone 12 V
 - b. Capacity (cold crank performance) 410 A
 - c. Terminal Groundednegative
 - d. Radio Suppression..... DEF (AUST) 172, MIL-STD-461A RE05, CE07
- 15. Fuels and Lubricants**
 - a. Fuel
 - (1) Type Diesel
 - (2) Capacity two 65 L tanks
 - b. Cooling System
 - (1) Type water (8% Nalcool Maximum Inhibitor)
 - (2) Capacity 12.8 L
 - c. Engine (Including Filters)
 - (1) TypeSAE Grade 40 (OMD-115)
 - (2) Capacity8.5 L
 - d. Axles
 - (1) Front Swivel Pin Housing:
 - (a) Type EP-00
 - (b) Capacity375 mL
 - (2) Front Axle:
 - (a) Type OEP-220
 - (b) Capacity1.7 L
 - (3) Intermediate Axle:
 - (a) Type OEP-220
 - (b) Capacity2.3 L
 - (4) Rear Axle:
 - (a) Type OEP-220
 - (b) Capacity2.6 L
 - e. Transmission
 - (1) TypeSAE Grade 40 (OMD-115)
 - (2) Capacity2.7 L
 - f. Transfer Case (With Power Take-off)
 - (1) TypeSAE Grade 40 (OMD-115)
 - (2) Capacity5.8 L
 - g. Brake and Clutch Fluid
 - (1) TypeOX(Aust)-8
 - (2) Capacityfill to level

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- h. Steering Box (Including reservoir)
 - (1) Type OX46
 - (2) Capacity 1.25 L
- i. Chassis Lubrication
 - (1) Type XG-291
 - (2) Capacity as required
- j. Wheel Bearings
 - (1) Type XG-291
 - (2) Capacity as required
- k. Winch
 - (1) Type OEP-220
 - (2) Capacity 2.1 L

16. Brakes

- a. Parking Brake cable-operated, transmission drum brake
- b. Foot Brake servo-assisted hydraulic dual system with front and rear disc brakes

17. Performance

- a. Fording Depth
 - (1) Prepared N/A
 - (2) Unprepared 1 000 mm
- b. Turning Circle (nominal) 17.0 metres
- c. Ramp Break Over Angle
 - (1) Unladen 148°
 - (2) Laden 152°
 - (3) Limiting Feature chassis rail
- d. Approach Angle
 - (1) Unladen 45°
 - (2) Laden 41°
 - (3) Limiting Feature tie-down points
- e. Departure Angle
 - (1) Unladen 33°
 - (2) Laden 30°
 - (3) Limiting Feature tie-down points
- f. Maximum Gradient 60%
- g. Fuel Consumption Target
 - (1) Highway Laden 22 L per 100 km
 - (2) 2nd Class Laden 27 L per 100 km
- h. Maximum Towed Load (trailer) 2 000 kg

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18. Trailer Facilities

- a. Socket Type.....NATO 12-pin
- b. Pintle Hook fully-rotating
- c. Brakes no facility

19. Power Take-off (PTO)

- a. Manufacturer..... Land Rover
- b. Type variable-speed, chain-driven, integral with the transfer case and incorporates a torque limiter
- c. Torque Limiter Setting 155 N.m

20. Point of Contact

National Fleet Manager (NFM)
Lt B Vehicles, CGSVSPO
DPM 7, Defence Plaza Melbourne
661 Bourke Street
MELBOURNE VIC 3000

Tel: (03) 9282 7391

21. Associated Information

- a. SIGC 2320 – 0159
- b. NSN..... 2320-66-139-4887
- c. RPS 02225 and 02228
- d. SCES 12195
- e. ILSI ALI MM 10-29
- f. User Handbook 7610-66-140-6653
- g. EMEI Vehicle A 291-5 General Service B Vehicle Tyre Guide
- h. EMEI Vehicle G 203..... Light Grade Repair
- i. EMEI Vehicle G 204-1 Medium Grade Repair
- j. EMEI Vehicle G 204-2 Heavy Grade Repair
- k. EMEI Vehicle G 209.....Servicing Instruction

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END

Distribution List: **VEH G 21.0 – Code 1** (Maint Level)
(Sponsor: CGSVSPO, Light B Vehicle Section)
(Authority: ECO CGSVSPO 120/10)